

### ABSTRACT

Improvements in increasing the amount of available silver in thermoplastic articles comprising certain silver-containing antimicrobial agents are provided. Such an invention requires the incorporation of a sufficient amount of a carboxylic acid salt within the thermoplastic article simultaneously with the necessary silver-containing antimicrobial agent. Certain carboxylic acid salts are standard acid scavengers for thermoplastic applications; however, the amounts required within this inventive thermoplastic article is well in excess of that commonly added within such articles. Surprisingly, such an excess amount of such standard salts, as well as other non-standard salts, present within the target thermoplastic causes the release of greater amounts of silver to the target article's surface, thereby permitting a greater degree of antimicrobial activity, among other potential benefits for such an increase in surface-available silver. Methods of forming such inventive thermoplastics are also encompassed within this invention.